

State Revolving Loan Fund

Clean Water SRF

South Carolina's
Integrated Priority Ranking System for
Wastewater and
Nonpoint Source Projects

July 2001
Final



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Appendix A

I. Introduction

Since the enactment of the Federal Clean Water Act (CWA) in 1972, America has made significant strides in restoring the nation's waters to a "fishable and swimmable" condition. However, despite the progress that has been made, many waterways still remain unsafe for fishing and swimming.

During the 1970s and 1980s, the United States Environmental Protection Agency (EPA) provided grants for the construction of publicly owned wastewater treatment works. The construction grants program was replaced in 1987 with the Clean Water State Revolving Fund (CWSRF), which provides low interest loans for: 1) construction of "treatment works" as defined in Section 212 of the Act; 2) the implementation of nonpoint source management activities (Section 319 of the Act), and 3) the development and implementation of estuary comprehensive conservation and management plans (Section 320 of the Act). The construction grants and revolving fund programs have helped reduce the point source pollutants — e.g., from municipal wastewater treatment facilities — entering the State's waters. However, much work remains to be done to protect and restore the State's water resources to a "fishable and swimmable" condition — particularly in the area of nonpoint source pollution.

Nonpoint source water (NPS) pollution generally comes from numerous diffuse sources. Runoff occurring after a rain event may transport sediment from plowed fields, construction sites and logging operations, pesticides and fertilizers from farms and lawns, motor oil and grease deposited on roads and parking lots, or bacteria containing waste from agricultural animal facilities or malfunctioning septic systems. The rain moves the pollutants across the land to the nearest water body or storm drain where they may impact the water quality in creeks, rivers, lakes, estuaries and wetlands. Nonpoint source pollution may also impact groundwater when it is allowed to seep or percolate into aquifers. The adverse effects of NPS pollution include physical destruction of aquatic habitat, fish kills, interference with or elimination of recreational uses of a water body, closure of shellfish beds, reduced water supply or taste and odor problems in drinking water, and increased potential for flooding as waterbodies become choked with sediment.

In South Carolina, nonpoint source pollution is at least partially responsible for water quality degradation in streams, lakes, and estuaries. As required by Section 319 of the CWA, South Carolina has developed, and is currently implementing, a program focused on managing NPS pollution to protect and enhance water quality in the State. This program is described in a document published by DHEC entitled *South Carolina Nonpoint Source Management Program Update (1999)*. This document outlines the state's strategy for addressing statewide water quality impairments attributed to nonpoint source pollution discharges.

Nine categories of NPS pollution that impact South Carolina's water are identified in this document (i.e., agriculture, forestry, urban areas, marinas and recreational boating, mining, hydrologic modification, wetlands disturbance, land disposal/ groundwater impacts, and atmospheric deposition). The program describes specific management measures for each category.

The CWA requires that states develop a comprehensive list of potential projects to be funded from the CWSRF and rank them in priority order. When the CWSRF was first created, the primary focus was the funding of "treatment works" projects. As a result, the ranking system by which South Carolina prioritized and selected construction projects focused on municipal wastewater collection and treatment systems.

In 1996, a joint state/EPA workgroup issued a policy document entitled *The Clean Water State Revolving Fund Funding Framework: Funding to Solve Our Nation's Water Quality Problems*. The *Funding Framework* encourages all states to integrate their planning and priority setting systems, and recommends two alternatives for doing so: a goals approach, or an integrated ranking system. South Carolina has chosen the latter approach.

The purpose of this document is to outline the new ranking system, which integrates nonpoint source projects into the State's Comprehensive Priority List of Projects eligible for funding from the SRF. This ranking system is designed to equally evaluate municipal wastewater and nonpoint source projects and rank them according to water quality priorities.

II. Identifying and Ranking Water Quality Priorities

The South Carolina Department of Health and Environmental Control (DHEC), Bureau of Water, operates several programs which, to meet various program goals, address water quality priorities. The State's SRF program will employ a number of these Bureau programs to identify projects in the context of CWSRF funding priority. The following is a brief description of each program with an explanation of how DHEC will employ each of these programs to rank potential CWSRF projects. The ranking system will assign a numeric value to each project. The point system is not intended to give a unique value to each project, but rather rank projects according to relative importance. Please note that periodic reevaluation of the programs listed below will likely change South Carolina's water quality priorities. Such changes may modify the ranking of projects on the State's comprehensive list of potential CWSRF projects.

A. General

The first question that DHEC will ask when evaluating a project for ranking is, "how will the project help enhance water quality"? NPS projects must conform with the goals and objectives outlined in the 1999 update of South Carolina's NPS management program and they must also include appropriate water quality Best Management Practices (BMP). For point source projects, the answer will range from complying with stricter discharge limits as a result of revised wasteload allocations, to correcting infiltration problems that are causing sewer overflows and treatment problems, to rehabilitating equipment to comply, or ensure continued compliance, with existing permit limits. If this question is adequately addressed, the project will receive five (5) points. **However, no points will be assigned to a project which is intended solely for the anticipation of future growth; such projects will rank last in order of priority.**

B. South Carolina's 303(d) List of Impaired Waterbodies

South Carolina maintains an extensive water quality and macroinvertebrate community monitoring network that includes close to 1000 stations throughout the State. Data from this network are used to compile South Carolina's list of priority ranked waterbodies targeted for water quality management action under Section 303(d) of the CWA. This "303(d) List", which is updated every two years, is a compilation of waters that do not currently meet the water quality standards established for them. Water quality standards are established for each water body in the state in Regulation 61-68, *Water Classifications and Standards* and Regulation 61-69, *Classified Waters*. These regulations were promulgated pursuant to the South Carolina Pollution Control Act (48-1-10, et seq, S.C. Code of Laws, 1996).

The process by which the 303(d) List is compiled and a list of the impaired water bodies is summarized in a document entitled *State of South Carolina Section 303(d) List for 2000, Priority-ranked Waterbodies Targeted for Water Quality Management Action, May 2, 2000*

As part of the "303(d) listing process", DHEC utilizes a point system for assigning a priority ranking to the waterbodies on South Carolina's 303(d) list. This point system ranks waterbodies based on the severity of the water quality impairment and the impaired use of the waterbody. The process involves an evaluation of each water body for all of the following factors:

- Potential impacts on endangered species;
- Severity of the pollution;
- Uses of the waterbody;
- Public support; and,
- Potential for primary contact recreation (swimming)

For more information concerning this point system, refer to Section 4 of South Carolina's 303(d) list document dated May 2, 2000. Based on the total numeric score, each impaired water body is given a priority ranking of 1, 2 or 3. The CWSRF program will use this priority ranking to assign points to potential CWSRF projects.

A project will receive points as follows if it will help correct the identified water quality impairment in a 303(d) Listed waterbody.

Priority Ranking of the Impaired Waterbody in the 303(d) List	Points
1	30
2	20
3	10

Please note that federal regulations allow impaired waterbodies to be removed from the 303(d) list if a Total Maximum Daily Load (TMDL) has been developed, however the stream may still be impaired. Therefore, any impaired waterbody that has been removed from the 303(d) list **due only** to the development of a TMDL, will be considered “listed” for the purpose of assigning points for potential CWSRF projects.

C. Implementation of an Approved Total Maximum Daily Load (TMDL)

Section 303 established the principle of the TMDL as a means of reducing water pollution in impaired waters. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. A TMDL contains the reductions needed to meet water quality standards and allocates those reductions among the point and nonpoint sources in the watershed. The calculation includes a margin of safety to ensure that the waterbody can be used for the purposes that have been designated, and accounts for seasonal variation in water quality.

After a TMDL has been developed for a waterbody, it must be submitted to EPA for approval. For a list of approved TMDLs for South Carolina, refer to DHEC's website at scdhec.net/water/html/tmdlwtr.html.

TMDLs are a very important step in the restoration of impaired waterbodies. Therefore, any proposed CWSRF project that will implement an approved TMDL will receive 30 points.

D. Unified Watershed Assessment and Watershed Restoration Action Strategies

In February 1998 EPA and the US Department of Agriculture (USDA) and other federal agencies released the *Clean Water Action Plan* (CWAP). This document outlined a plan to accelerate efforts to protect and restore the nation's water resources. The CWAP called for states to identify watersheds that have critical water quality concerns. To identify these watersheds, the CWAP required that states look at all watersheds within their boundaries and determine whether they: 1) meet clean water and other natural resource goals and support healthy aquatic systems; or, 2) are in need of restoration because the waters within them do not meet, or face imminent threat of not meeting, clean water and other natural resource goals. This assessment process is known as the Unified Watershed Assessment (UWA). In addition to conducting the UWA, the CWAP asked that states select Water Restoration Priorities for fiscal years 1999 and 2000, and develop Watershed Restoration Action Strategies (WRAS) for restoring these watersheds.

DHEC and the USDA Natural Resources Conservation Service (NRCS) worked with other state and federal stakeholders to complete the UWA for South Carolina, select five watersheds as restoration priorities for fiscal years 1999 and 2000, and develop the WRAS. The process through which this was completed and the results of that process are summarized in a document entitled *South Carolina Unified Watershed Assessment and FY 1999-2000 Watershed Restoration Priorities, September 1998*.

A similar stakeholder group selected three additional watersheds as restoration priorities for FY 2001 and 2002. The process through which these additional watersheds were selected and the results of that process are summarized in a document entitled *Watershed Restoration Action Strategies South Carolina, Revised January 2000*.

DHEC intends to revise the WRAS ever two years at which time additional priority watersheds will be selected and appropriate strategies for restoring these watersheds developed.

The UWA involved the classifying of all 8-digit watersheds in South Carolina into one of the following four categories

Category I – Watersheds in Need of Restoration: These watersheds do not now meet, or face imminent threat of not meeting, clean water and other natural resource goals.

Category II – Watersheds Meeting Goals, Including Those Needing Action to Sustain Water Quality: These watersheds meet clean water and other natural resource goals and standards and support healthy aquatic systems.

Category III – Watersheds with Pristine/Sensitive Aquatic System Conditions on Lands Administered by Federal, State, or Tribal Governments

Category IV – Watersheds with Insufficient Data to Make an Assessment

DHEC and other stakeholders in the UWA process felt that the extensive monitoring network that South Carolina has in place generates sufficient information for the assessment of all 8-digit watersheds in the State. Furthermore, input from the stakeholders group, particularly the US Forest Service, indicated that no watersheds in the State that contain significant areas of public lands are sufficiently pristine to be considered for Category III. Thus, no watersheds were classified as Category III or IV in the UWA.

According to federal guidelines, "Category I watersheds are any 8-digit watersheds in which reasonably current information shows non-attainment of clean water or other natural resource goals in more than about 15 – 25% of the assessed water or natural resource components of the watershed." DHEC and NRCS felt that this guidance provided a reasonable means of differentiating Category I and II watersheds and chose 20% as an acceptable threshold. The results of the UWA classified 25 watersheds as Category I and 7 watersheds as Category II. For a map and list of the watersheds and their corresponding category, refer to map I.B and table I.C of the UWA/WRAS document dated September 1998.

After completing the UWA, the stakeholders group selected five of the Category I watersheds as Priority 1 watersheds on which to focus during fiscal years 1999 and 2000, and develop strategies for restoring these watersheds. The following watersheds were selected as Priority 1 watersheds.

Hydrologic Unit Code	Watershed Name
03040201	Pee Dee
03040206	Waccamaw
03050103	Catawba
03050109	Saluda
03060101	Seneca-Keowee

DHEC and NRCS then prioritized the remaining Category I watersheds in order to establish a long-term schedule for developing watershed restoration strategies. Those watersheds that were deemed top priority by either DHEC or NRCS, but were not chosen among the five 1999 and 2000 priorities, were designated as Priority 2 watersheds. All other Category I watersheds were designated as Priority 3. For a list of these watersheds and their corresponding priority ranking, refer to Section II.D of the UWA/WRAS document dated September 1998. It should be noted that as the criteria used to determine the priority order (e.g., water quality, land use, land management practices, etc.) are continually changing, South Carolina reserves the right to revisit these priority rankings and revise them as needed.

In January 2000 the list of Watershed Restoration Priorities was updated to include three additional watersheds on which to focus during fiscal years 2001 and 2002. The following is a list of those Priority Watersheds.

Hydrologic Unit Code	Watershed Name
03040202	Lynches
03050202	SC Coastal
03050206	Four Hole Swamp

These as well as future watersheds selected for inclusion in the WRAS will be considered priority 1 watersheds when ranking CWSRF projects.

DHEC will use the UWA and WRP process described above to further prioritize CWSRF projects. Each project will receive points according to the watershed in which it is located.

Watershed Restoration Priorities for South Carolina		Points
Priority 1 Watersheds		30
03040201	Pee Dee	
03040206	Waccamaw	
03050103	Catawba	
03050109	Saluda	
03060101	Seneca-Keowee	
03040202	Lynches	
03050202	SC Coastal	
03050206	Four Hole Swamp	
Priority 2 Watersheds		20
03040205	Black	
03050105	Upper Broad	
03050108	Enoree	
03050208	Broad – St. Helena	
03060103	Upper Savannah	
Priority 3 Watersheds		10
03040207	Coastal Carolina – Sampit	
03050101	Lake Wylie	
03050104	Wateree	
03050106	Lower Broad	
03050107	Tyger	
03050111	Lake Marion	
03050201	Cooper	
03050205	Edisto	
03050207	Salkehatchie	
03060106	Middle Savannah	
03060107	Stevens	
03060109	Lower Savannah	
Category II Watersheds		0
03040203	Lumber	
03040204	Little Pee Dee	
03050203	North Fork Edisto	
03050204	South Fork Edisto	
03050110	Congaree	
03050112	Santee	
03060102	Tugaloo	

E. Protecting Public and Private Drinking Water Supplies from Contamination

All aquifers in the state are protected under the *SC Water Classifications and Standards* (R.61-68). Most meet the definition of Class GB Groundwater Standards, thus are protected as potential sources for drinking water.

DHEC prepares and maintains an inventory of known groundwater contamination cases in the state. This effort is funded by a grant from EPA, authorized by Section 106 of the Clean Water Act. The criteria used to determine whether a site is listed in the inventory are the drinking water quality standards outlined in the State *Primary Drinking Water Regulations* (R.61-58) and the *SC Water Classification and Standards*. All sites where recent groundwater analytical data indicate that the Class GB standards have been exceeded are included in the most recent publication of the *South Carolina Groundwater Contamination Inventory*.

In 1996 the Federal Safe Drinking Water Act was amended to include a provision requiring states to develop and implement a Source Water Assessment Program (SWAP). The first phase of this program is to delineate the source water protection area (SWPA) for each surface water and groundwater source utilized by community and non-community public water systems in the state. The next step is to inventory potential sources of contamination within each delineated SWPA. The final step is to determine the susceptibility of each surface and groundwater source to contamination.

This program, which is in various stages of implementation, is outlined in a document entitled *South Carolina Source Water Assessment and Protection Program, February 1999*.

1. Protecting Public Drinking Water Supplies from Contamination

In implementing South Carolina's SWAP, DHEC will assess the susceptibility to contamination of each surface water intake and groundwater source used by public drinking water supplies. In accordance with South Carolina's EPA -approved SWAP, DHEC will inventory potential contamination sources, including known groundwater contamination sites, within the SWPA for each surface and groundwater source and assign to each contaminant source a susceptibility ranking of "high", "moderate" or "low". This analysis thereby operates to inform a public water system that actions can be taken to reduce the susceptibility of its drinking water supply to contamination. Such actions could include borrowing money from the CWSRF to clean up a contamination site or upgrade a wastewater treatment plant to meet Class I Reliability Classification Requirements as outlined in South Carolina Regulation 61-67.

A project will receive points as follows if it will help reduce the susceptibility of a public drinking water source to contamination.

Susceptibility Ranking of the Contaminant Source	Points
High	15
Moderate	10
Low	5

A project will receive an additional 5 points if the contaminant source has already impacted the public drinking water source (e.g., contaminants from a leaking underground storage tank have been detected in water samples taken from a public water supply well). If any primary drinking water standards have been exceeded at the surface water intake or well, the project will receive an additional 5 points.

2. Protecting Private Drinking Water Wells from Contamination

A project that proposes to mitigate groundwater contamination that is expected to impact any private drinking water wells will receive 10 points. If a private well has already been impacted, the project will receive 5 additional points. If any primary drinking water standards have been exceeded at the well, the project will receive an additional 5 points.

III. Summary of Points System Used to Establish Project Priority Ranking

The following table summarizes the numeric ranking system for prioritizing potential CWSRF projects:

	Priority Ranking Criteria	If Yes, add the following point value to the Project
1	Is the project solely for the anticipation of future growth?	If the answer is yes, the project will not receive any points and will rank last in order of priority. Disregard the remaining questions in this table. If the answer is no, continue answering the following questions.
2	Will the project help enhance water quality?	5
3	Will the project correct the identified water quality impairment of a waterbody that is ranked priority 1 on the 303(d) list?	30
4	Will the project correct the identified water quality impairment of a waterbody that is ranked priority 2 on the 303(d) list?	20
5	Will the project correct the identified water quality impairment of a waterbody that is ranked priority 3 on the 303(d) list?	10
6	Will the project implement an approved TMDL?	30
7	Is the project located in one of the following 8-digit? 03040201 Pee Dee 03040206 Waccamaw 03050103 Catawba 03050109 Saluda 03060101 Seneca-Keowee 03040202 Lynches 03050202 SC Coastal 03050206 Four Hole Swamp	30
8	Is the project located in one of the following 8-digit? 03040205 Black 03050105 Upper Broad 03050108 Enoree 03050208 Broad – St. Helena 03060103 Upper Savannah	20
9	Is the project located in one of the following 8-digit watersheds? 03040207 Coastal Carolina – Sampit 03050101 Lake Wylie 03050104 Wateree 03050106 Lower Broad 03050107 Tyger 03050111 Lake Marion 03050201 Cooper 03050205 Edisto	10

	03050207 Salkehatchie 03060106 Middle Savannah 03060107 Stevens 03060109 Lower Savannah	
10	Is the project located in one of the following 8-digit watersheds? 03040203 Lumber 03040204 Little Pee Dee 03050203 North Fork Edisto 03050204 South Fork Edisto 03050110 Congaree 03050112 Santee 03060102 Tugaloo	0
11	Will the project help reduce the susceptibility of a public drinking water source to contamination from a contaminant source with a high susceptibility ranking?	15
12	Will the project help reduce the susceptibility of a public drinking water source to contamination from a contaminant source with a moderate susceptibility ranking?	10
13	Will the project help reduce the susceptibility of a public drinking water source to contamination from a contaminant source with a low susceptibility ranking?	5
14	Has the contaminant source already impacted (contaminants detected) a surface water intake or well used by a public water system?	5
15	If the public water supply has been impacted, have any primary drinking water standards been exceeded at the source (surface water intake or well)?	5
16	Will the project mitigate groundwater contamination that is expected to impact any private wells?	10
17	Has the groundwater contamination already impacted a private well?	5
18	If a private well has been impacted, have any primary drinking water standards been exceeded at the well?	5

IV. Developing and Updating the State's Comprehensive Priority List of Projects

In order for a project to be considered for funding from the CWSRF, it must appear on the State's comprehensive priority list of projects. To be included in this list, an eligible project sponsor must complete a project questionnaire supplied by DHEC (refer to appendix A for a copy of this questionnaire). A project sponsor may submit a completed questionnaire to the SRF Section of DHEC's Bureau of Water at any time. Once the questionnaire is received, DHEC staff will evaluate the project based on the ranking system discussed above and assign the project a numeric score. The project will then be added to the comprehensive priority list of projects. DHEC will maintain an updated list of projects on its website: <http://www.scdhec.net/water/html/grants.html>.

V. Eligible Project Sponsors

An eligible CWSRF project sponsor means a county, municipality, special purpose district, commissioners of public works, or any other public agency of the state that will own the project.

VI. Selecting Projects for Funding

DHEC will prepare an annual *Intended Use Plan* (IUP) that will describe how the State intends to use the funds in the CWSRF for the year and how those uses support the objectives of the CWA. The IUP will include a list of projects selected from the comprehensive priority list for funding during the next year. Once the IUP has been drafted, notice will be given to the public that the draft IUP is available for review and comment for a period of at least 30 days. Once the comment period has ended DHEC will review any comments received and make changes to the IUP as appropriate. Both the draft and final IUPs may be found on DHEC's website: <http://www.scdhec.net/water/html/grants.html>

Although a priority list is required, states are not required to select the highest ranked projects in any given year. Therefore, South Carolina will continue to fund projects on a “first come, first served” basis, making readiness to proceed a significant funding factor. However, at such time as demand for funding for projects ready to proceed exceeds the loan funds available in the CWSRF, ranking will take priority over readiness to proceed. Other factors may be considered for selecting projects when demand exceeds the funds available. Such factors will be explained in the annual IUP.

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Glossary of Abbreviations

303(d) List	List of priority-ranked waterbodies targeted for management action
BMP	Best Management Practices
CWA	Clean Water Act [Federal]
CWAP	Clean Water Action Plan
CWSRF	Clean Water State Revolving Fund
DHEC	[South Carolina] Department of Health and Environmental Control
EPA	[U.S.] Environmental Protection Agency
FY	Fiscal Year
NPDES	National Pollutant Discharge Elimination System
NPS	Nonpoint source [water pollution]
NRCS	Natural Resources Conservation Service [Division of U.S. Department of Agriculture]
R.61-68	State Regulation 61-68 [Also R.61-69, R.61-58, etc.]
SRF	State Revolving Fund
SWAP	Source Water Assessment Program
SWPA	Source Water Protection Area
TMDL	Total Maximum Daily Load
USDA	U.S. Department of Agriculture
UWA	Unified Watershed Assessment
WRAS	Watershed Restoration Action Strategies

Appendix A

Clean Water SRF Project Questionnaire